CLAIMS

Claim **1**: (canceled) A system to cause solidification at least in part comprising: means for directing an airflow across a heated high-voltage structure so disposed as to provide thermionic emission, the ionized airflow being then attracted towards a plurality of elongated charge bars, said items to be at least in part solidified, being interposed between said high-voltage structures and said charge bars.

Claim **2**: (canceled) The system in claim **1** wherein said objects are moved into a second position wherein the ionized vapors and fumes emitted therefrom are repelled therefrom by a second charge bar, and attracted to a moving endless band, said band being continuously cleaned for collection of said vapors and fumes adhered thereto.

Claim **3**: (canceled) The system in claim **1** wherein the plurality of heated, high-voltage structures are coated with material that facilitates thermionic-emission, alkaline earth oxides being exemplary of said materials.

Claim **4**: (canceled) The system in claim **1** wherein electrically charged structures confine and direct said ionized airflow toward the items to be at least in part solidified.

Claim **5**: (canceled) The system in claim **1** wherein the high-voltage structures are perforated hollow tubes containing flammable gas under pressure, so disposed as to emit flames to facilitate ion-emission.

Claim **6**: (canceled) The system in claim **1** wherein said ionized airflow causes said fumes and vapors being emitted from said items to be at least in part solidified to become ionized, thereby facilitating removal of said fumes and vapors by electrostatic repulsion and attraction ,

Claim **7**: (canceled) The system in claim **1** wherein said items to be at least in part solidified are moved to a second position where a second charge bar causes the ionized vapors and fumes emitted therefrom to be repelled away from said items to be at least in part solidified by an electrostatic field and attracted therefrom to a means for collection of said vapors and fumes.

Claim **8**: (canceled) The system in claim **1** wherein said items to be at least in part solidified are moved to a plurality positions where the ionized vapors and fumes emitted from said items, are repelled therefrom by an electrostatic field from a second charge bar and attracted to a means for collection of said vapors and fumes, each of said positions being interposed with said heated high voltage structures.

Claim **9**: (canceled) The system in claim **1** wherein said ionized vapors and fumes are caused undergo a chemical reaction wherein the molecules in said fumes and vapors react chemically to produce larger, heavier molecules.

Claim **10**: (canceled) The system in claim **1** wherein the items to be solidified are inks on the surface of a moving web of paper and

wherein the heated high-voltage structures consist of a plurality of spaced elongated tubes positioned parallel to the plane of said web and having the major axis of said tubes at a right angle to the direction of web travel,

said tubes being coated with a material that facilitates thermionic emission, and

opposed charge-bars so disposed that the web is interposed between said tubes and said charge bars,

said tubes being maintained at a sufficiently high temperature and electrical voltage potential so as to create an electrostatic field between said tubes and charge bars, thereby ionizing said airflow,

said ionized airflow impinging upon said web, thereby causing said ink on said web to become solidified and the fumes and vapors emitted from said ink to become ionized.

Claim **11**: (canceled) The device in Claim **1** wherein a substantial portion of the airflow from which said fumes and vapors have been electrostatically cleaned are recirculated into the incoming airflow.

Claim **12**: (canceled) The system in claim **1** wherein said ionized vapors and fumes are caused undergo a chemical reaction wherein the ionized molecules in said fumes and vapors react chemically to form larger, heavier molecules through the use of catalysts.

Claim **13:** (canceled) The system in claim **1** wherein said ionized vapors and fumes are caused undergo a chemical reaction wherein the ionized molecules in said fumes and vapors are separated from said airstream and used to fuel an internal combustion engine.

Claim **14**: (currently amended) A system for solidifying ink printed on a moving web of paper comprising:

a structure means for directing an airflow across a plurality of elongated and perforated hollow tubes at a high negative electrical potential,

said tubes also containing flammable gas under pressure, so disposed as to emit flames along the length of said tubes,

said tubes thereby becoming sufficiently heated so as to initiate thermionic-emission of ions from said tubes into said airstream, and

charge bars so disposed that said web is interposed between said charge bars and said tubes,

~~said~~ the ionized airstream being thereby attracted to the web interposed in the electrostatic field created between said tubes and said charge-bars, thereby causing ionization of ~~said~~ gasses, vapors and fumes as they are emitted from said web, and

means for collecting said ionized gasses, fumes and vapors.

Claim **15**: (original) The system in claim **14** wherein the voltage on the charge tubes is sufficient to cause a corona on the surface of the web, the ultraviolet energy causing the inks and coatings to become solidified.

Claim **16**: (original) The system in claim **14** wherein the voltage on the charge tubes is sufficient to create an ozone atmosphere at the surface of the web, thereby causing the inks and coatings to become solidified.

Claim **17**: (currently amended) A system for solidifying ink printed on a moving web of paper comprising:

a structure means for directing an airflow across a plurality of elongated tubes,

said elongated tubes being maintained at a sufficiently high temperature and electrical positive voltage potential to cause a stream of ions to be released from said tubes and said flames, thereby ionizing said airstream wherein

said elongated tubes contain a mixture of fuel and air and being so disposed as to support flames along their length, and

said flames being spaced from the web being treated , and

charge bars so disposed that said web is interposed between said charge bars and said elongated tubes, whereby an electrostatic field is created causing ionization of said vapors, gasses and fumes as they are repelled from said web.

Claim **18**: (new) A system for solidifying a coating on a moving web comprising: blower and duct structures for directing an airflow across a plurality of heated high-voltage structures so disposed as to provide thermionic emission, the heated and ionized airflow then being attracted towards a plurality of elongated charge bars,

said moving web being interposed between said heated high-voltage structures and said charge bars and

said ionized airstream being thereby attracted to the web interposed in the electrostatic field created between said wires and said charge-bars,

thereby causing ionization of the emitted effluent consisting of condensing vapors, fumes and nascent gasses as they leave said web,

said web then moving into a second position wherein said emitted effluent is repelled from the web by a second charge bar and attracted to a collection structure.

Claim **19:** (new) The system in claim **18** wherein said coating is ink on the surface of a moving web of paper.

Claim **20:** (new) The system in claim **18** wherein said heated high-voltage structures are perforated hollow tubes containing flammable gas under pressure.

Claim **21:** (new) The system in claim **18** wherein said heated high-voltage structures are coated with material that facilitates thermionic-emission, alkaline earth oxides being exemplary of said materials.

Claim **22:** (new) The system in claim **18** wherein said collection structure consists of a cooled, moving endless band, said band being continuously cleaned for collection of said emitted effluent adhered thereto.